

FIG. 1

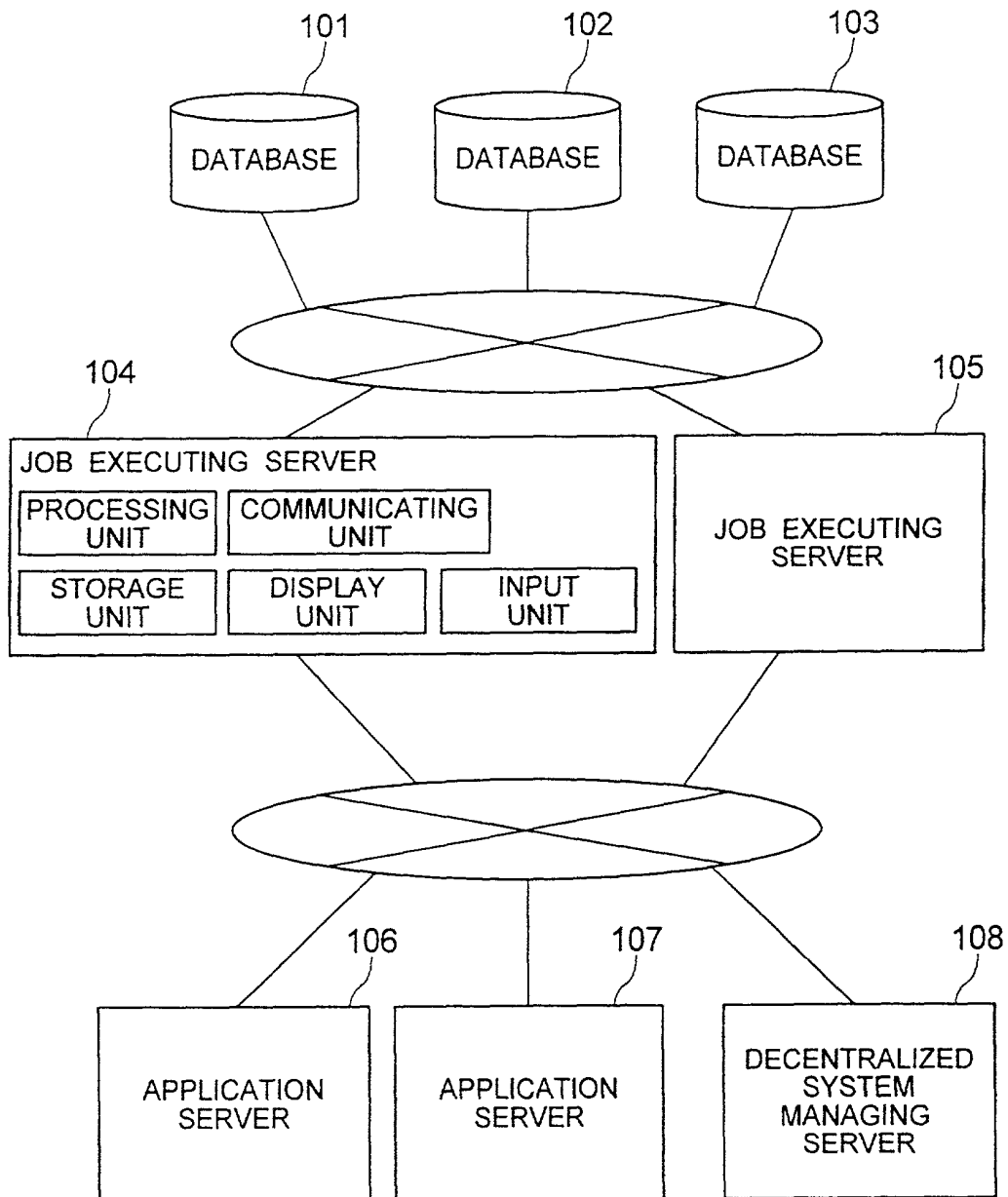


FIG. 2

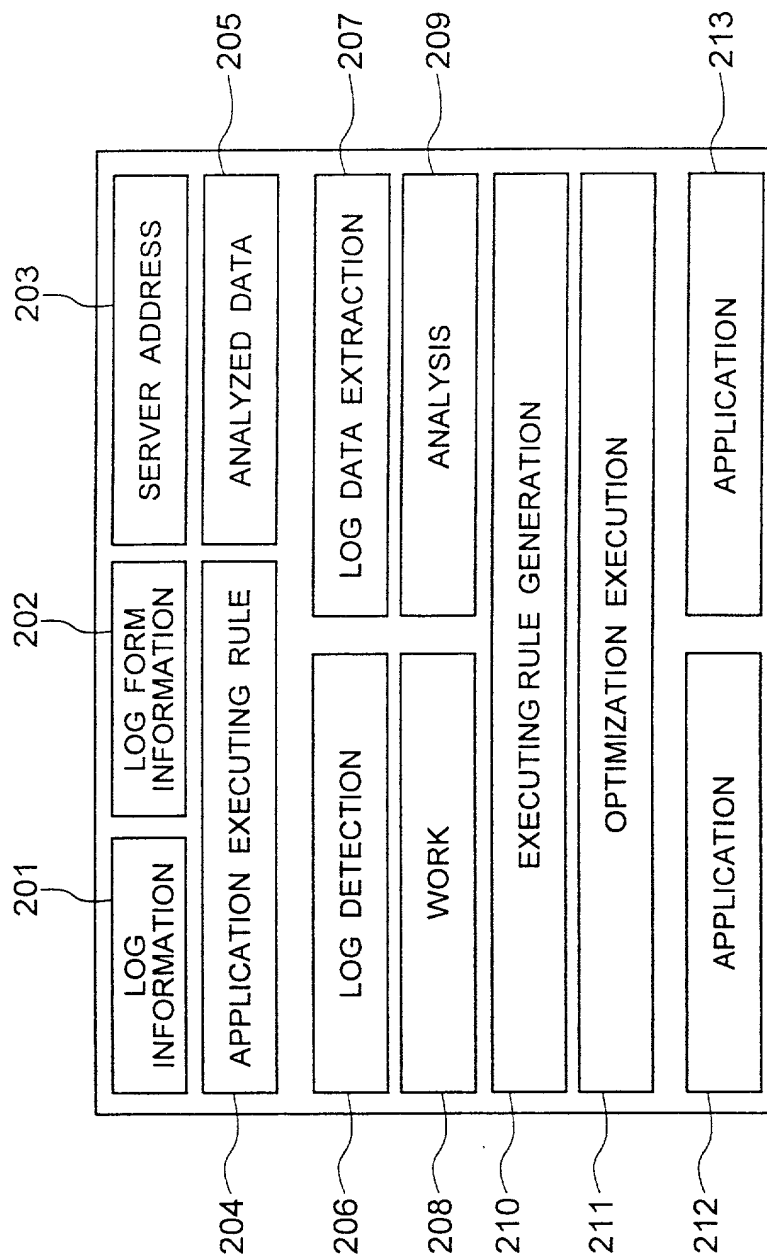
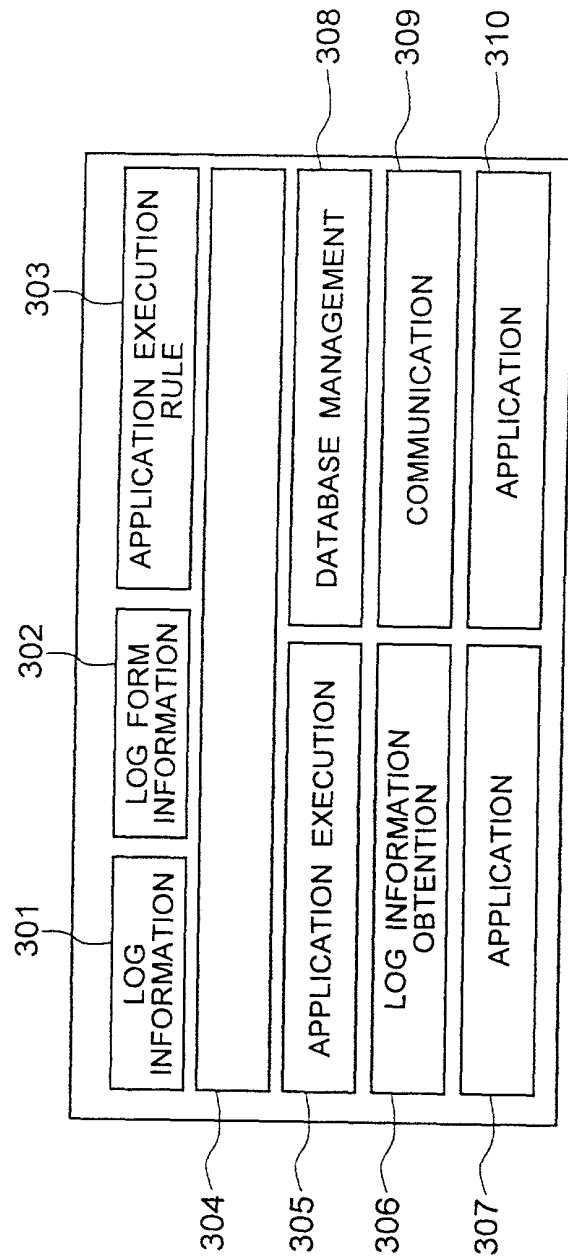


FIG. 3



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Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 16869S-037000

Sheet 4 of 27

FIG. 4

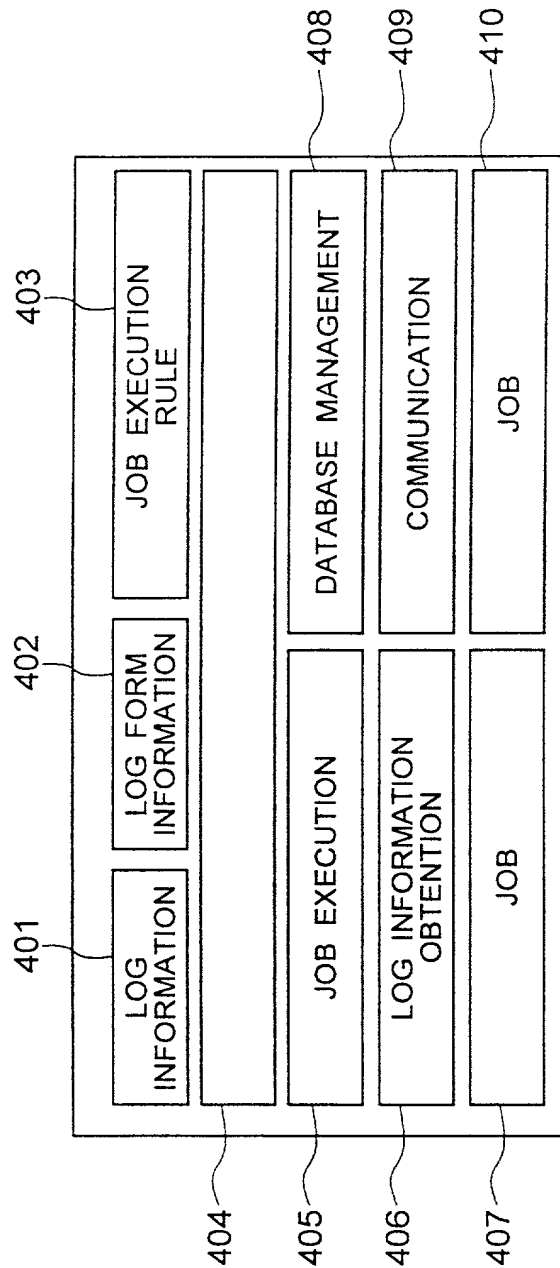


FIG. 5

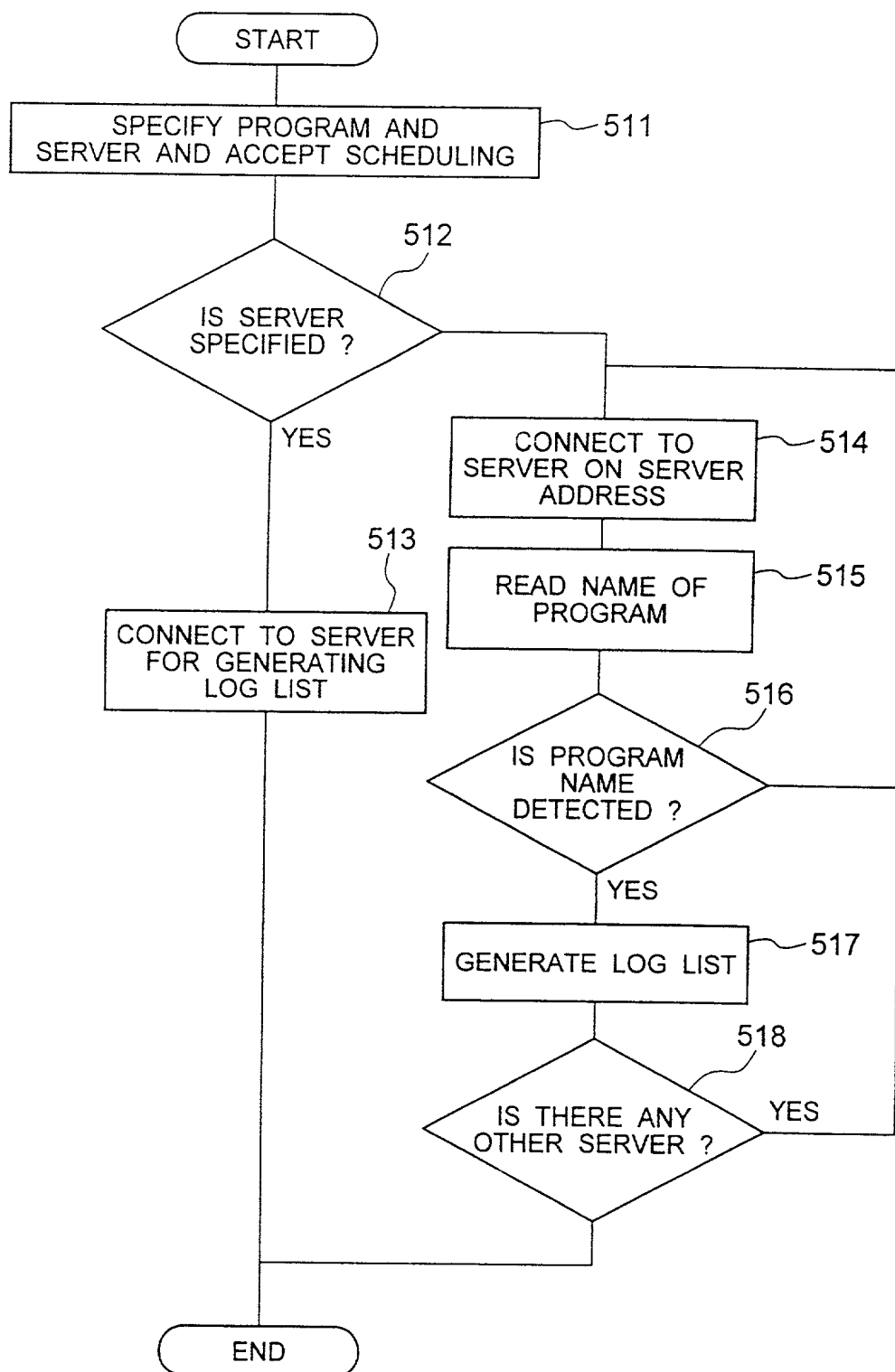


FIG. 6

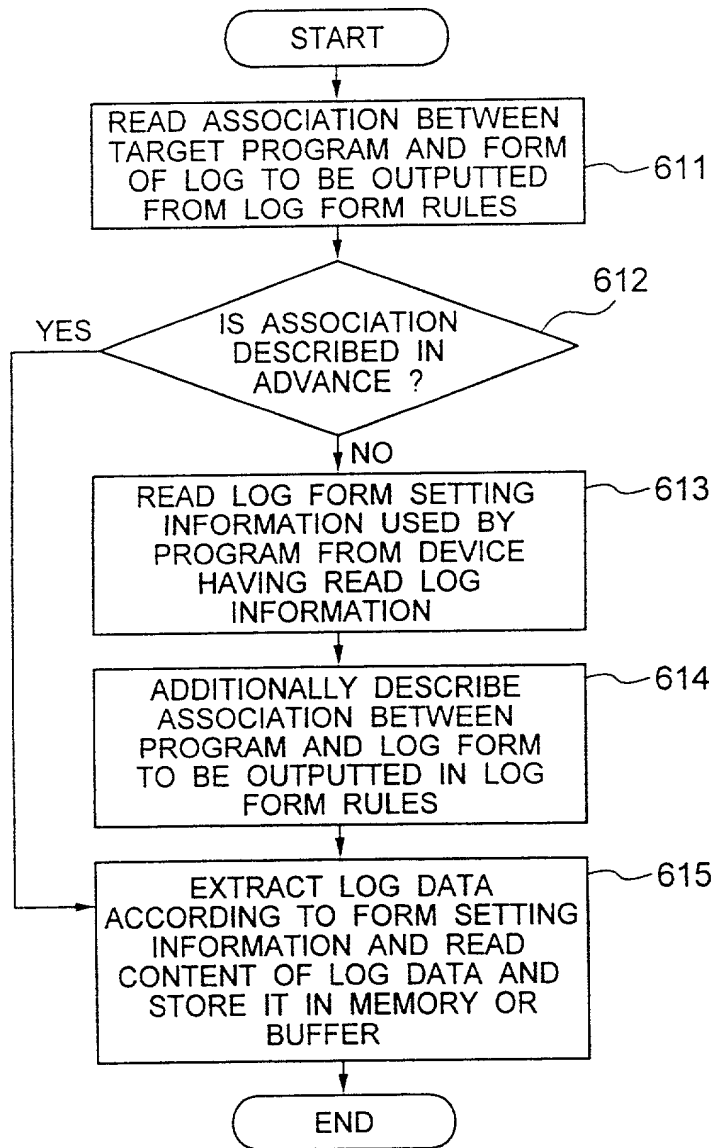


FIG. 6 FOR BRIEF DESCRIPTION

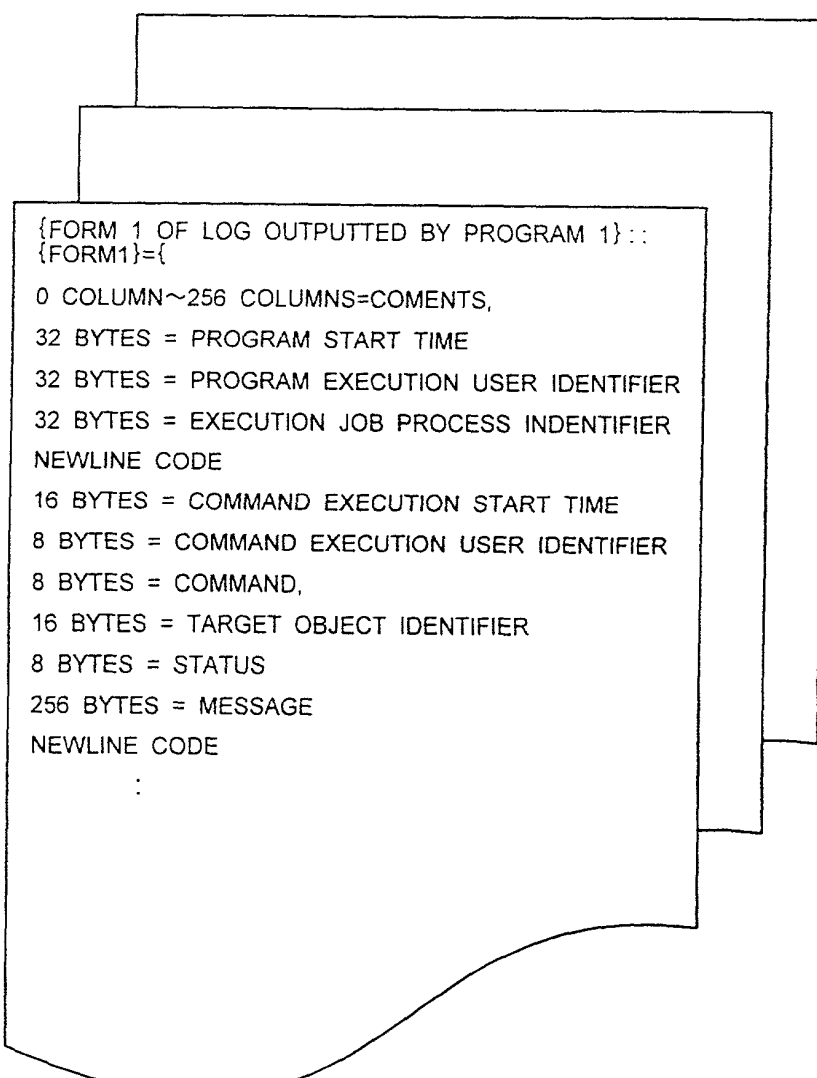
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Title: Method and Apparatus for Supporting a System Management

Atty. Pocket No. 16869S-037000

Sheet 7 of 27

FIG. 7



The diagram shows three overlapping rectangular boxes representing a log form. The front-most box contains the following text:

```
{FORM 1 OF LOG OUTPUTTED BY PROGRAM 1}::  
{FORM1}={  
  0 COLUMN~256 COLUMNS=COMENTS,  
  32 BYTES = PROGRAM START TIME  
  32 BYTES = PROGRAM EXECUTION USER IDENTIFIER  
  32 BYTES = EXECUTION JOB PROCESS INDENTIFIER  
  NEWLINE CODE  
  16 BYTES = COMMAND EXECUTION START TIME  
  8 BYTES = COMMAND EXECUTION USER IDENTIFIER  
  8 BYTES = COMMAND,  
  16 BYTES = TARGET OBJECT IDENTIFIER  
  8 BYTES = STATUS  
  256 BYTES = MESSAGE  
  NEWLINE CODE  
  :
```

FIG. 8

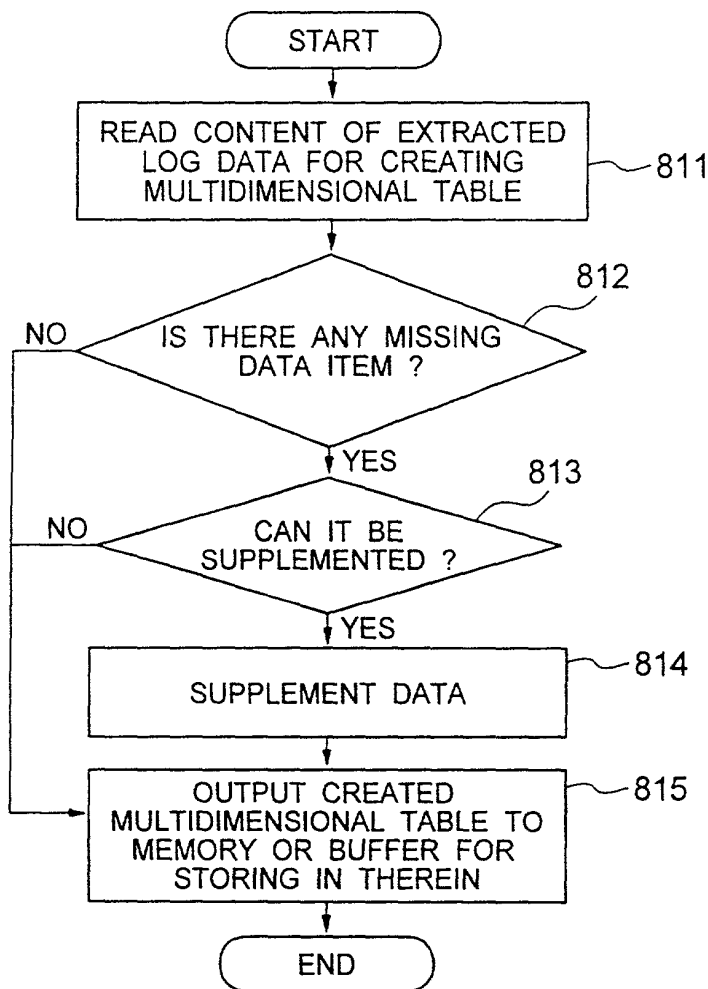
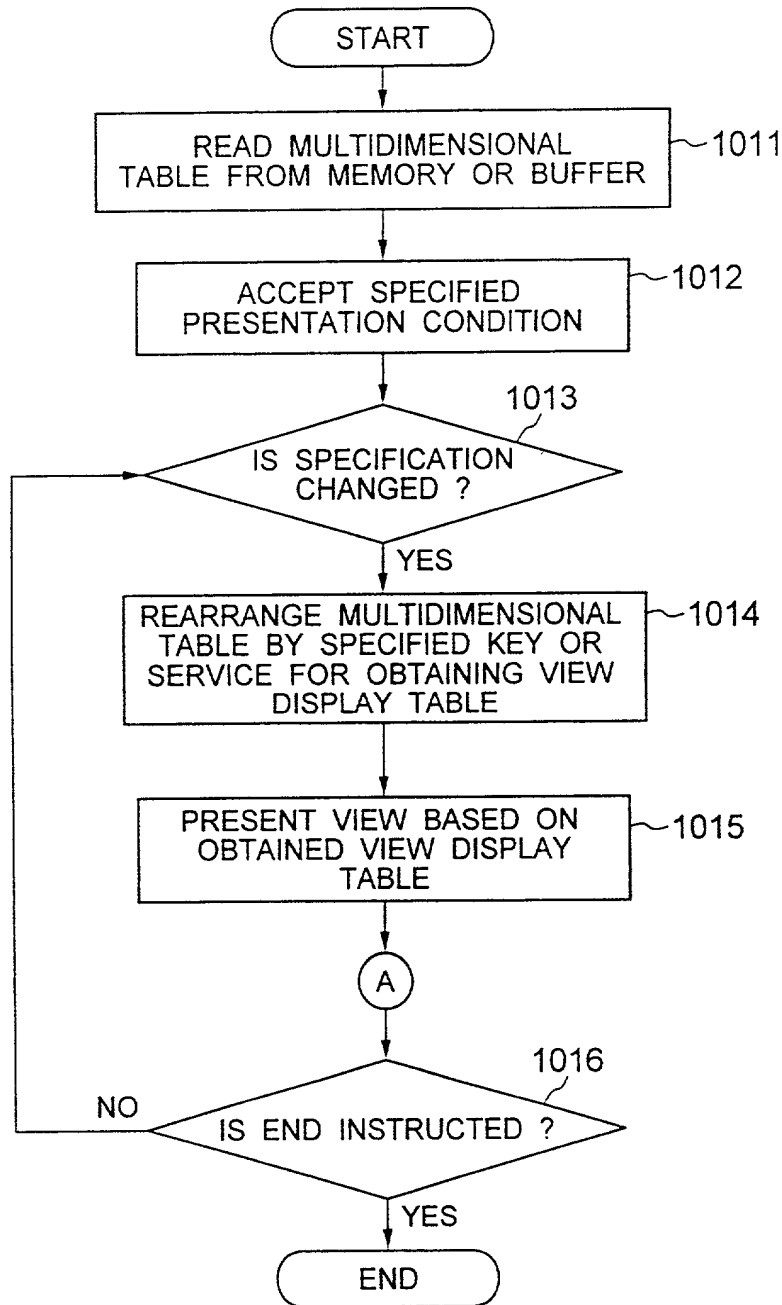
[illegible]

FIG. 9

FIG. 9

START TIME	USER IDENTIFIER	SERVICE IDENTIFIER	OBJECT IDENTIFIER	COMMAND	STATUS
00 : 00 : 00	User1	Service1	Object1	Command1	Status1
00 : 00 : 25	User1	Service1	Object1	Command2	Status2
00 : 00 : 29	User2	Service2	Object2	Command1	Status3
00 : 00 : 05	User1	Service2	Object3	Command3	Status4

FIG. 10



Applicant: Yumiko Seki, et al.

Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 18839S-037000

Sheet 11 of 27

FIG. 11

FIG. 11

USER IDENTIFIER	START TIME	SERVICE IDENTIFIER	OBJECT IDENTIFIER	COMMAND	STATUS
User1	00 : 00 : 00	Service1	Object1	Command1	Status1
User1	00 : 00 : 25	Service1	Object1	Command2	Status2
User1	00 : 00 : 05	Service2	Object3	Command3	Status4

USER IDENTIFIER	START TIME	SERVICE IDENTIFIER	OBJECT IDENTIFIER	COMMAND	STATUS
User2	00 : 00 : 29	Service2	Object2	Command1	Status3

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Title: Method and Apparatus for Supporting a System Management

Att. Docket No. 1636SS-037000

Sheet 12 of 27

FIG. 12

SERVICE IDENTIFIER	START TIME	USER IDENTIFIER	OBJECT IDENTIFIER	COMMAND	STATUS
Service1	00 : 00 : 00	User1	Object1	Command1	Status1
Service1	00 : 00 : 25	User1	Object1	Command2	Status2

SERVICE IDENTIFIER	START TIME	USER IDENTIFIER	OBJECT IDENTIFIER	COMMAND	STATUS
Service2	00 : 00 : 29	User2	Object2	Command1	Status3
Service2	00 : 01 : 05	User1	Object3	Command3	Status4

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Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 16859S-037000

Sheet 13 of 27

FIG. 13A

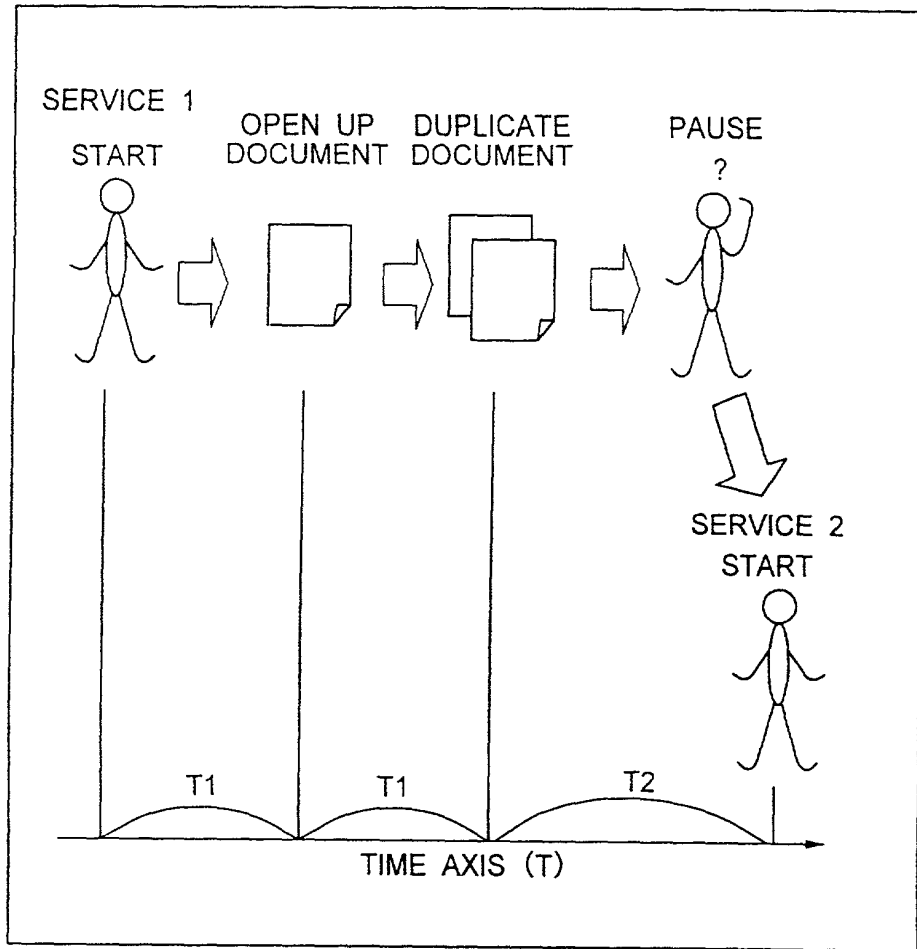


FIG. 13B

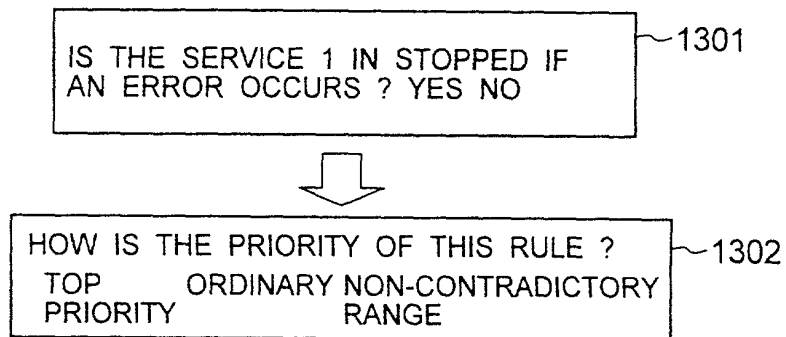


FIG. 14A

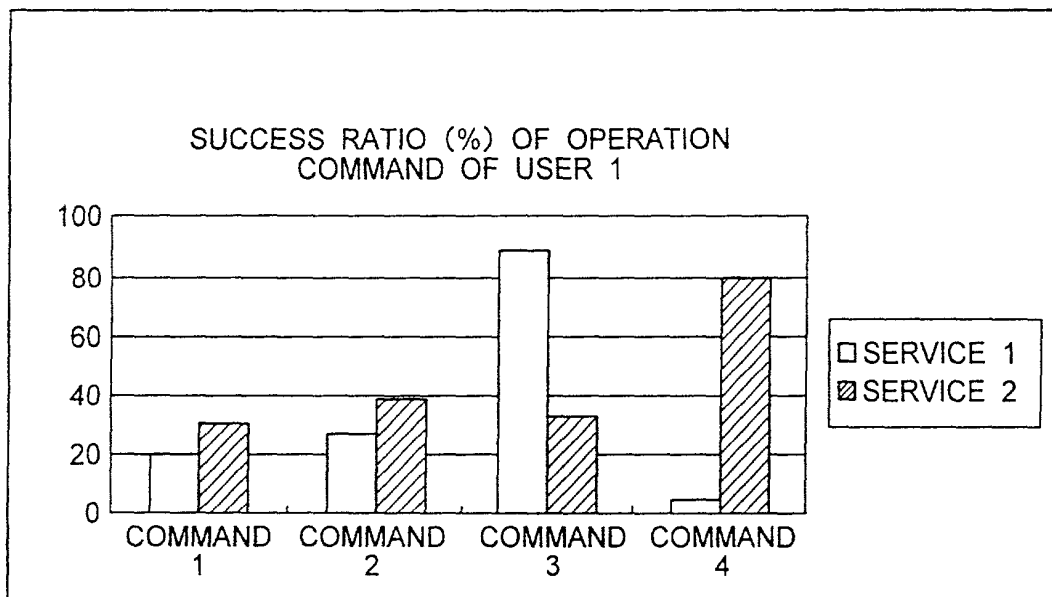


FIG. 14B

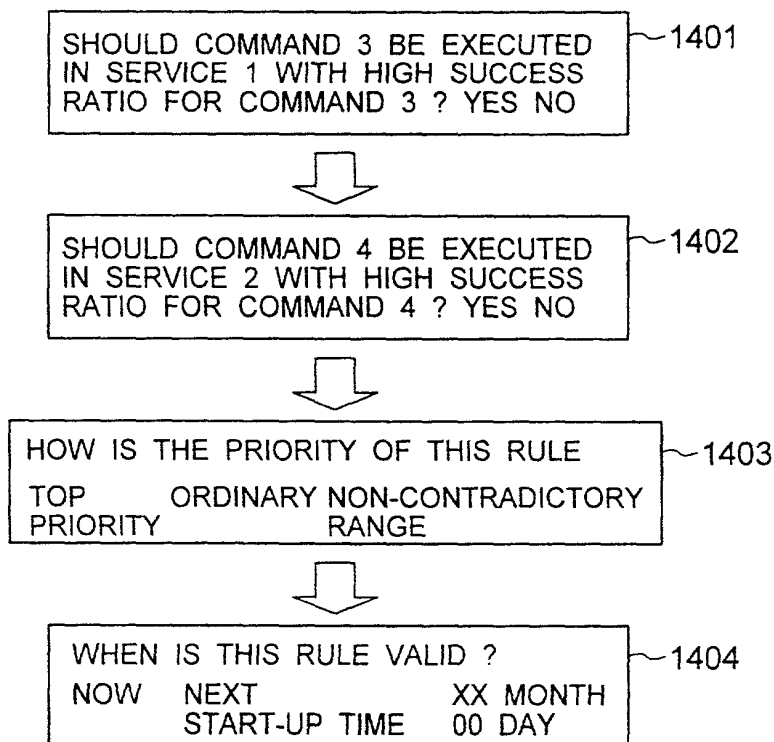


FIG. 15A

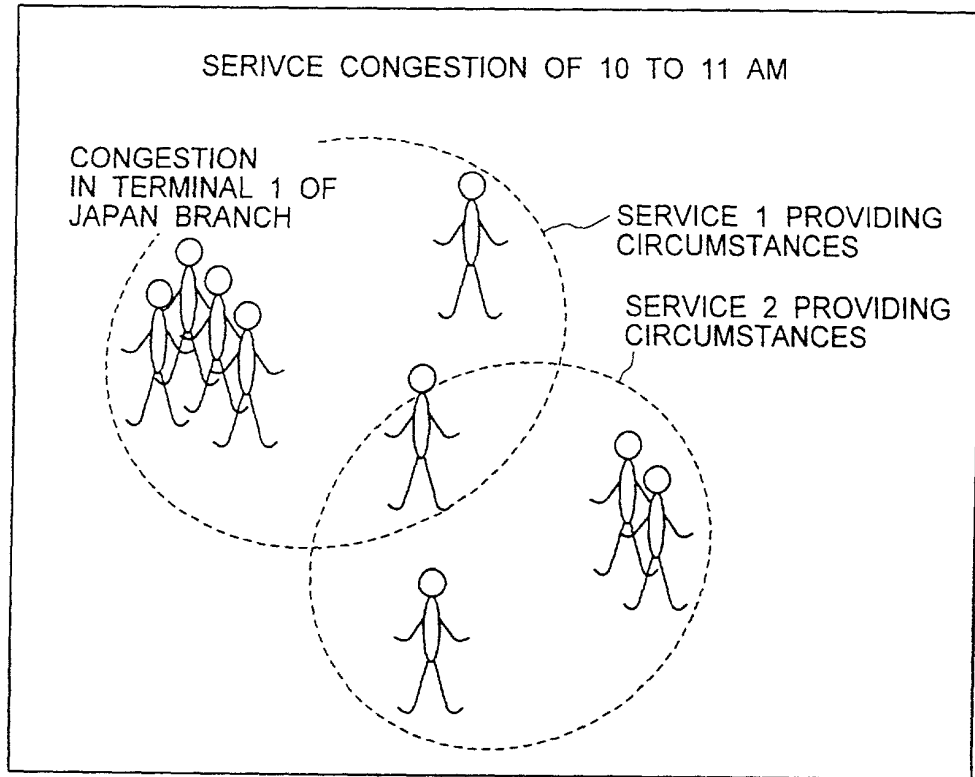
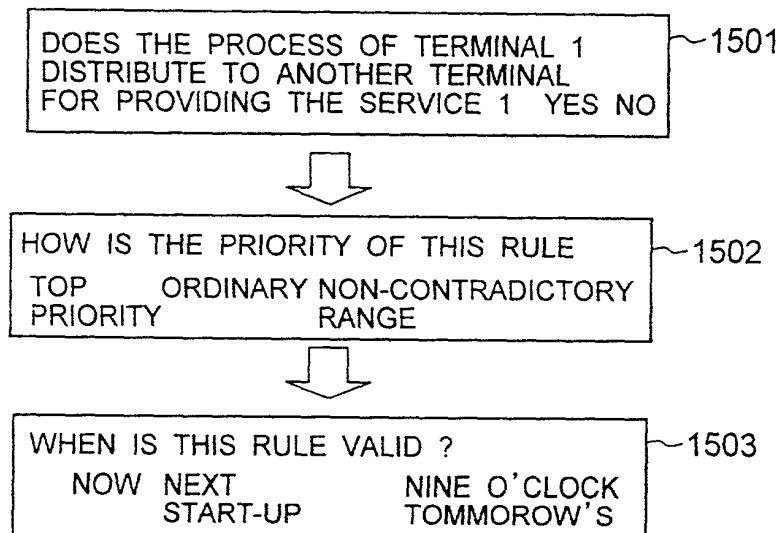


FIG. 15B



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Title: Method and Apparatus for Supporting a System Management

Atty. Pocket No. 16869S-037000

Sheet 16 of 27

FIG. 16A

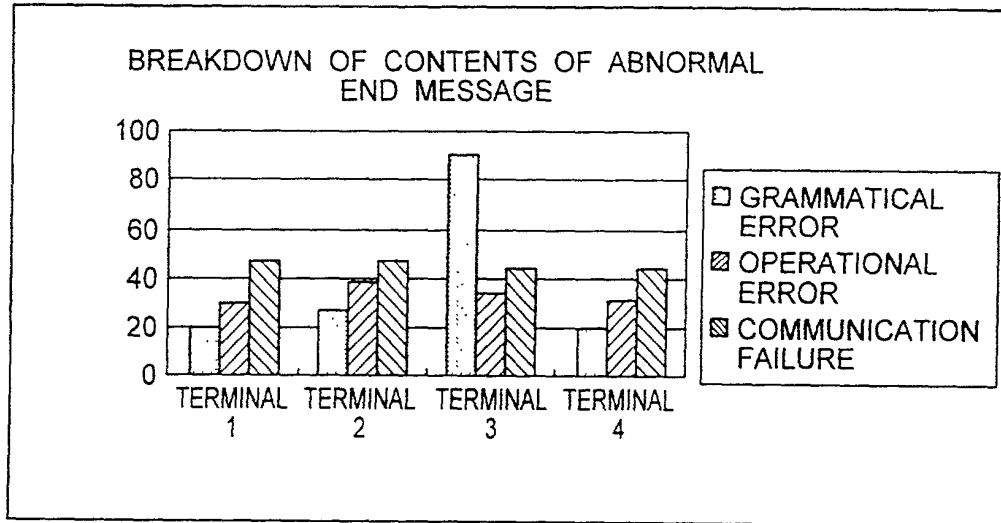


FIG. 16B

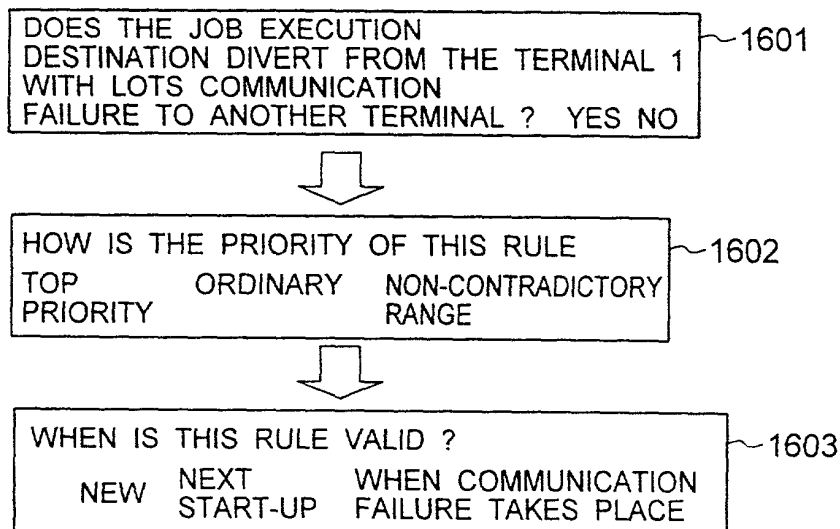
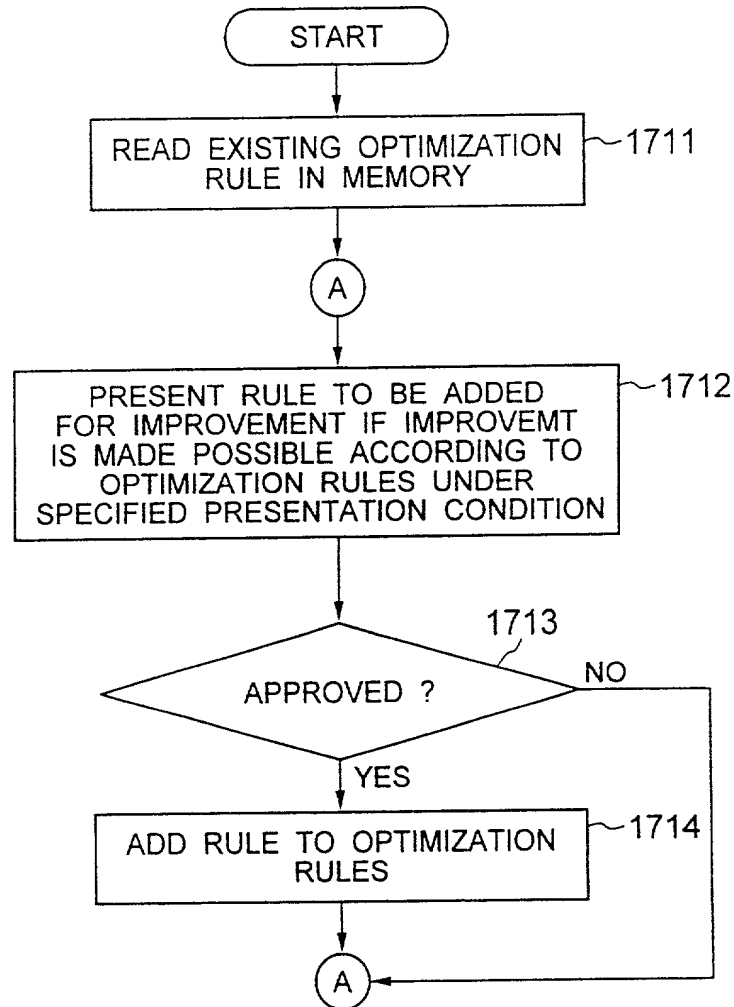


FIG. 17



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Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 16869S-037000

Sheet 18 of 27

FIG. 18

RULE 1 [NON-CONTRADICTIONARY RANGE]:
IF THE INTERVAL BETWEEN THE OPERATING
TIMES OF THE USER EXCEEDS A
THRESHOLD VALUE, THE OPERATION
GUIDANCE IS PRESENTED

RULE 2 [TOP PRIORITY]:
THE SERVICE PASSED BY A CERTAIN TIME
LATER THAN END BY ERROR IS
AUTOMATICALLY STOPPED

RULE 3 [ORDINARY]:
PRIORITY IS GIVEN TO THE PROCESS OF
ISSUING THE COMMAND IN THE SERVICE
WITH A HIGH SUCCESS RATIO THEREFOR

RULE 4 [ORDINARY]:
DISTRIBUTE THE PROCESS TO BE DONE IN
THE TERMINAL WITH HIGH NETWORK LOAD
SELECTED AMONG THE TERMINALS WHERE
THE SAME SERVICE IS PROCESSED TO
ANOTHER TERMINAL

RULE 5 [TOP PRIORITY]:
IF THE RATIO OF ABNORMAL END BY
COMMUNICATION FAILURE EXCEEDS A
PREDETERMINED VALUE, THE JOB
EXECUTING DESTINATION IS RETRIEVED
FROM THE OTHER JOB EXECUTING
DESTINATIONS AND IS USED THEREFOR

:

:

FIG. 19

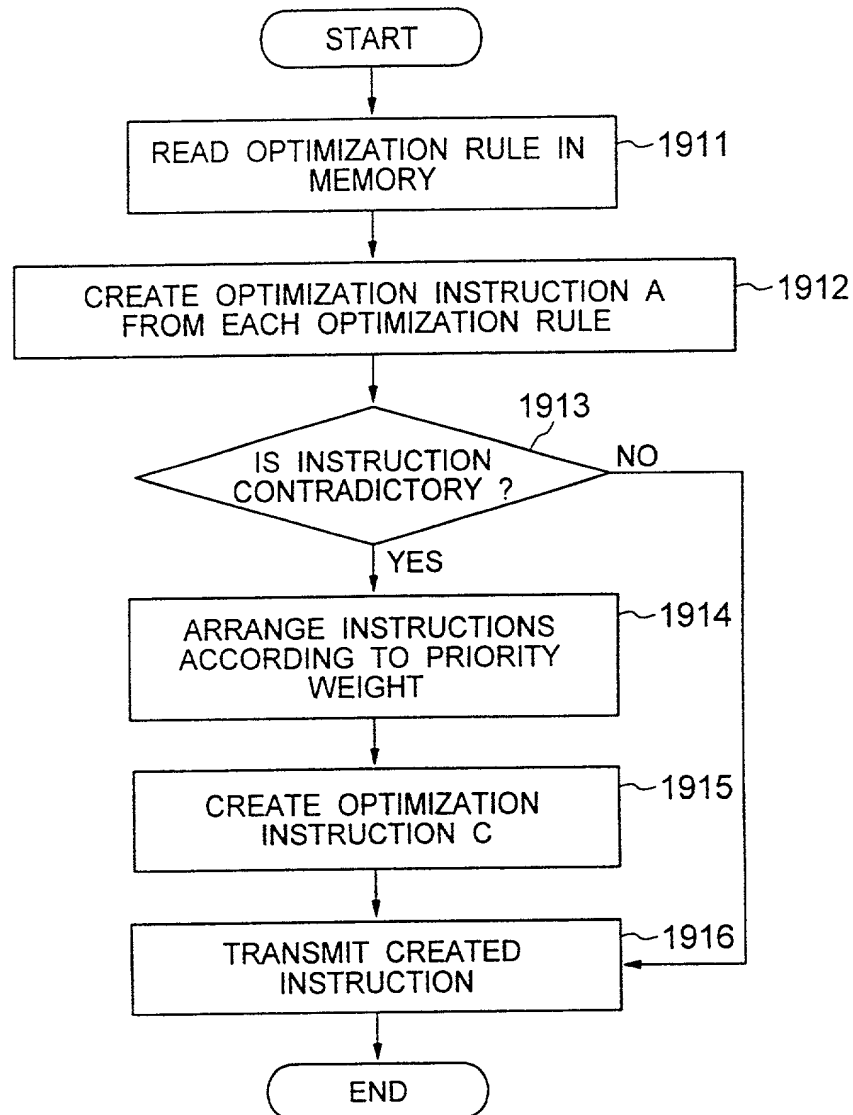


FIG. 19

FIG. 20

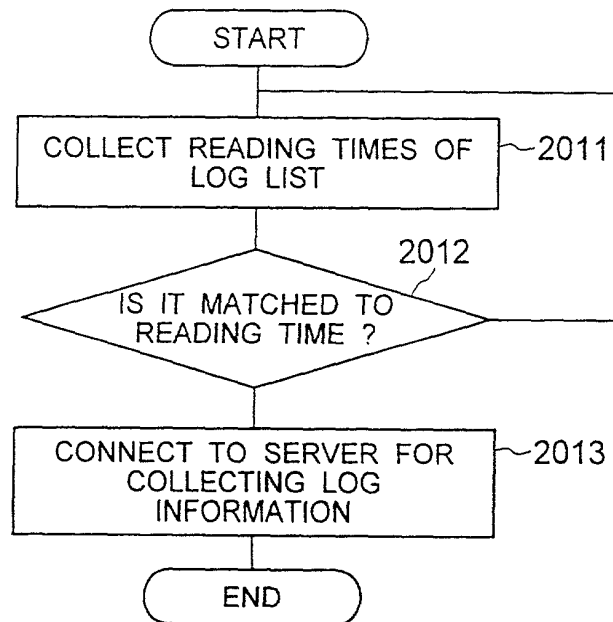
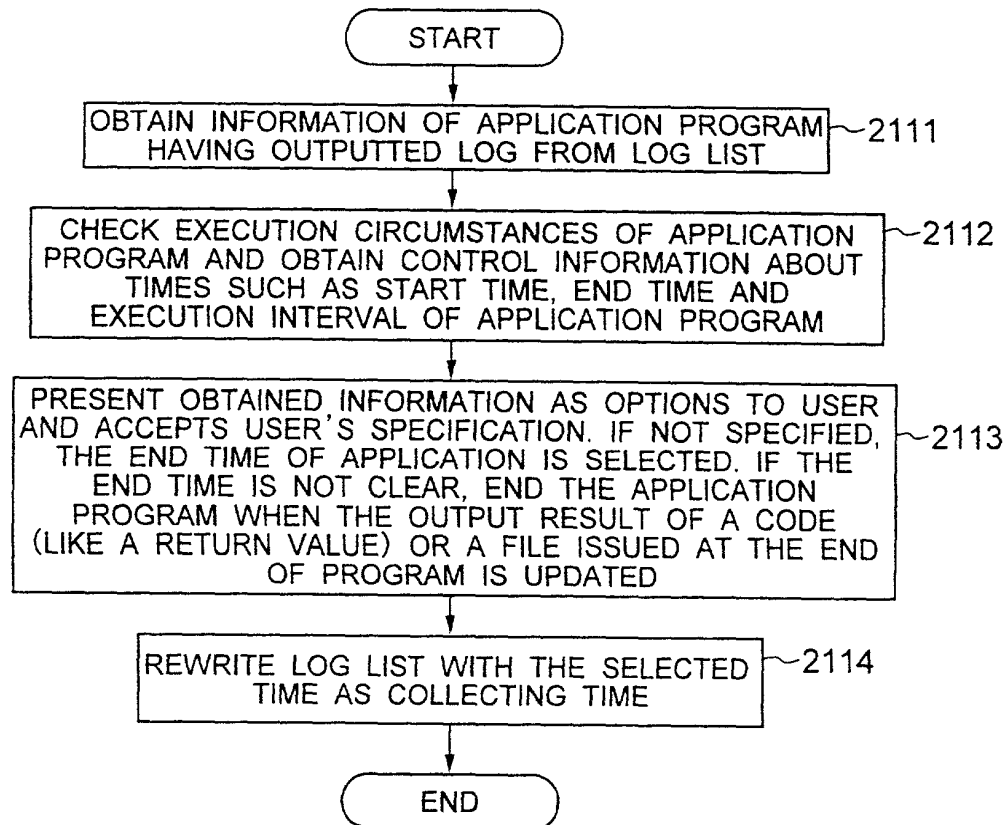


FIG. 21



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Title: Method and Apparatus for Supporting a System Management

Att. Docket No. 168695-037000

Sheet 21 of 27

FIG. 22

SCHEDULING TIMING OF LOG COLLECTION

☐ DIRECTLY SPECIFY  TO FILE EDITING SCREEN

OBTAIN LOG EVERY HOUR(S) MINUTE(S)

☒ ASSOCIATE APPLICATION (ONLY OPTIONS ARE DISPLAYED)

- ☐ START TIME
- ☐ END TIME
- ☐ EVERY INTERVAL
- ☐ DATABASE UPDATE TIME

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Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 16869S-037000

Sheet 22 of 27

FIG. 23A

NO SCHEDULING SPECIFIED

DEVICE ADDRESS AND LOG INFORMATION NAME	APPLICATION NAME	READ TIME
188.12.13.11/logfile1	188.12.13.11/App_1	DEFAULT
192.11.13.32/D/Log/logfile2	202.11.34.22/App_2	EVERY 15 MINUTES
211.00.23.323/C/log_file3	123.232.4.332/App_3	EVERY DAY
233.44.556.32/Temp/log_data4	233.44.556.32/App_4	

FIG. 23B

SCHEDULING SPECIFIED

ADDRESS AND FILE NAME	APPLICATION NAME	READ TIME
188.12.13.11/logfile1	188.12.13.11/App_1	DEFAULT
192.11.13.32/D/Log/logfile2	202.11.34.22/App_2	EVERY 15 MINUTES
211.00.23.323/C/log_file3	123.232.4.332/App_3	EVERY DAY
233.44.556.32/Temp/log_data4	233.44.556.32/App_4	END TIME OF APPLICATION PROGRAM

Applicant: Yumiko Seki, et al.

Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 16869S-037000

Sheet 23 of 27

FIG. 24

EXISTING OPTIMIZATION RULES (2401)

RULE 1: IF AN ERROR TAKES PLACE, ASK THE
PROCESS OF THE SERVICE USED BY THE COMMAND
WITH ERROR OCCURRENCE
RULE 2: ASK IF THE SERVICE IS TO BE STOPPED
IF THE SERVICE IS NOT OPERATED DURING THE
LONGER TIME THAN THE TIME T
RULE 3: SPECIFY A PRIORITY TO ANOTHER RULE
TO THIS RULE

SPECIFIED PRESENTATION CONDITION (2402)

CREATE A USER'S OPERATION HISTORY MAP
(PRESENTATION ITEM = USER, SERVICE,
START TIME, COMMAND HISTORY, TIME PASSAGE,
ERROR STATUS) AND PRESENT THE MAP

PROCESS (1712): CREATE A RULE TO BE ADDED FOR IMPROVEMENT

WHAT IS THE PROCESS OF THE SERVICE 1 WITH
ERROR OCCURRENCE ?
SHOULD THE SERVICE 1 BE STOPPED IF IT IS
NOT OPERATED DURING A LONGER TIME THAN
THE TIME T ?

---2403



PRESENTATION EXAMPLE TO
USER (FIG.13)

SHOULD THE SERVICE 1 WITH
ERROR OCCURRENCE BE STOPPED ?
YES NO

~1301

HOW IS THE PRIORITY OF THIS RULE ?
TOP ORDINARY NON-CONTRADICTIONARY
PRIORITY RANGE

~1302

FIG. 24 "EXISTING OPTIMIZATION RULES (2401)"

Applicant: Yumiko Seki, et al.

Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 16869S-037000

Sheet 24 of 27

FIG. 25

EXISTING OPTIMIZATION RULE (2501)

RULE 4: IF THE SUCCESS RATIOS OF THE COMMAND OPERATION AMONG THE SERVICES ARE DIFFERENT FROM ONE ANOTHER BY 20 % OR MORE, ASK IF PRIORITY IS GIVEN TO THE SERVICE WITH A HIGH SUCCESS RATIO

RULE 5: SELECT AS THE EFFECTIVE SETTING TIME OF THE RULE AS ANY ONE OF NOW, NEXT START-UP, SPECIFIED DATE, AND SPECIFIED EVENT

SPECIFIED PRESENTATION CONDITION (2502)

PRESENT A SUCCESS RATIO OF THE USER'S OPERATION COMMAND

PROCESS (1712): CREATE A RULE TO BE ADDED FOR IMPROVEMENT AND PRESENT THE RULE

IS THE PRIORITY OF SERVICE 1 > SERVICE 2 SET TO THE COMMAND 3 ?
WHEN IS THE PRIORITY SETTING VALID ?

2503



EXAMPLE OF PRESENTATION TO USER (FIG.14)

SHOULD THE COMMAND 3 BE EXECUTED IN THE SERVICE 1 WITH A HIGH SUCCESS RATIO ? YES NO

1401

WHEN IS THIS RULE VALID ?

1404

NOW NEXT
 START-UP 0 MONTH DAY

FIG. 26

EXISTING OPTIMIZATION RULE (2601)

RULE 6: WHEN THE CONGESTION OF A CERTAIN TERMINAL EXCEEDS 300% WITHIN THE SAME SERVICE, AN ABNORMALITY ALARM IS OUTPUTTED AND ASK THE PROCESS

RULE 7: IF A PLURALITY OF TERMINALS MAY BE USED WITHIN THE SAME SERVICE WHEN AN ABNORMALITY TAKES PLACE, ASK A TERMINAL TO BE USED

SPECIFIED PRESENTATION CONDITION (2602)

PRESENT THE CONGESTION OF THE SERVICE AT 10 TO 11 AM

PROCESS(1712): CREATE A RULE TO BE ADDED FOR IMPROVEMENT AND PRESENT IT

PRESENT AN ABNORMALITY OCCURRENCE TO THE TERMINAL 1 AND ASK THE PROCESS SHOULD ANOTHER TERMINAL WITHIN THE SAME SERVICE 1 BE USED ?

2603



EXAMPLE OF PRESENTATION TO USER (FIG.15)

IS THE PROCESS OF THE TERMINAL 1 DISTRIBUTED TO ANOTHER TERMINAL FOR PRESENTING THE SERVICE 1 ? YES NO

1501

FIG. 26

Applicant: Yumiko Seki, et al.

Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 16869S-037000

Sheet 26 of 27

FIG. 27

EXISTING OPTIMIZATION RULE (2701)

RULE 8: ASK IF THE TERMINAL WHERE THE COMMUNICATION FAILURE EXCEEDS 20 % SHOULD BE DIVERTED INTO ANOTHER TERMINAL
 RULE 5: SELECT ANY ONE OF NOW, NEXT START-UP, SPECIFIED DATE AND SPECIFIED EVENT AS THE EFFECTIVE SETTING TIME OF THE RULE

SPECIFIED PRESETATION CONDITION (2702)

PRESENT THE CONTENT BREAKOUT (%) OF THE ABNORMAL AND MESSAGE (PRESENTATION ITEM: GRAMMATICAL ERROR, OPERATIONAL ERROR, COMMUNICATION FAILURE)

PROCESS (1712): CREATE A RULE TO BE ADDED FOR IMPROVEMENT AND PRESENT IT

SHOULD THE JOB EXECUTION BE DIVERTED FROM THE TERMINAL 1 WITH LOTS OF COMMUNICATION FAILURES INTO ANOTHER TERMINAL ?

2703



EXAMPLE OF PRESENTATION TO USER (FIG.16)

SHOULD THE JOB EXECUTION DESTINATION DIVERTED FROM THE TERMINAL 1 WITH LOTS OF COMMUNICATION FAILURES TO ANOTHER EXECUTION DESTINATION ? YES NO

1601

WHEN IS THIS RULE VALID ?

NOW NEXT WHEN COMMUNICATION
 START-UP FAILURE TAKES PLACE

1603

FIG. 27

Applicant: Yumiko Seki, et al.

Title: Method and Apparatus for Supporting a System Management

Atty Docket No. 16869S-037000

Sheet 27 of 27

FIG. 28A

CREATED OPTIMIZATION INSTRUCTION	SENT OPTIMIZATION INSTRUCTION	
	SERVER	SYSTEM
STOP JOB #	START JOB #	START JOB #
STOP APPLICATION #	START APPLICATION #	START APPLICATION #
GIVE PRIORITY TO JOB A	GIVE PRIORITY TO JOB B	
• • •	• • •	• • • •

FIG. 28B

DEVICE ADDRESS	SENT OPTIMIZATION INSTRUCTION
188.12.13.11	START JOB A
192.11.13.32	GIVE PRIORITY TO APPLICATION C